APRIL/MAY 2025

FEEL64A/CEEL63A/BEEL63A — MICROCONTROLLER 8051 AND ITS APPLICATIONS

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL the questions.

1. Give the function of program counter in 8051.
2. What is called external memory?
3. List the modes of serial data transmission.
4. What are called software generated interrupts?
5. Give the example for swap instruction.
6. What is byte level operation?
7. Differentiate between Push and Pop.
8. What is called range of call?
9. Write the principle of D/A converter.
10. List any two applications of stepper motor.

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SECTION B — (5 × 5 = 25 marks)

Answer ALL the questions.

11. (a) Describe the following in 8051 (i) Program counter and data pointer (ii) A and B CPU register.

Or

(b) Outline the I/O pin, ports and circuits of 8051.

12. (a) Discuss the serial data interrupt.

Or

(b) Explain about the interrupt priorities.

13. (a) Describe the bit level logic operations.

Or

(b) Write the program to add two '8' bit numbers.

14. (a) Enumerate the PUSH and POP opcodes.

Or

(b) Give a brief account on calls and subroutine.

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15. (a) Describe the interfacing of 7 segment display.

Or

(b) Explain the D/A conversion.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain the operation of 8051 Micro-controller.

17. Write a note with a neat diagram on the serial data transmission modes.

18. Describe the byte level logic operations of 8051 microcontroller.

19. Differentiate between Jump and Call instructions in detail.

20. Analyze the A/D conversion in detail.

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